

IV. REMARKS/ARGUMENTS

A. Status of the Application

Claims 1-14 are pending. Claims 1-14 have been amended herein. No new matter and no new claims have been added.

Applicant respectfully requests consideration of the foregoing amendments and the following remarks, and in view of same, further requests the allowance of all pending claims as presented herein.

B. Continuing Data

As requested in the Office action, the continuing data in the related-applications section of the specification has been updated.

C. Claim Rejections

1. Rejection of Claims 1-14 under 35 U.S.C. § 112

Claims 1-14 were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. Insofar as it may be applied against the present claims, this rejection is respectfully traversed.

Claims 1-14 have been amended to overcome the rejection under 35 U.S.C. § 112, second paragraph, for indefiniteness. Accordingly, it is respectfully requested that this rejection be withdrawn.

2. Rejection of Claim 1 under 35 U.S.C. § 103(a)

Claim 1 stands rejected under 35 U.S.C. § 103(a) over International Patent Application Publication No. WO 96/29602 to Tajima ("Tajima '602") or Japanese patent document number JP 10-332687 to Sumiya et al. ("Sumiya '687"). Insofar as they may be applied against the present claims, these rejections are respectfully traversed.

According to the claimed concentration method, a target substance is captured by suspending magnetic particles in a liquid, therefore, such target substances can be easily captured by agitating the liquid incorporating the magnetic particles and contacting the magnetic particles and the target substances. Also, with the claimed concentration method, since the magnetic particles are separated by magnetic force, the magnetic particles are re-suspended into liquids of

various volumes by removing the magnetic field. Further, with the claimed concentration method, since a liquid whose volume is greater than the maximum volume capable of being sucked into or discharged from the liquid passage at the time of one of suction or discharge, is continually passed through the liquid passage, the claimed method can promptly and efficiently carry out concentrating, diluting, separating and re-suspending of the magnetic particles.

It is noted that the translation of Sumiya '687 provided by the Examiner was prepared by computer, is extremely poor, includes many terms designated as "*****" which are words that could not be translated and generally is meaningless. As such, it is submitted that the translation of Sumiya '687 relied upon in the rejection of claim 1 is improper. Specifically, the translation does not meet the requirements of MPEP §706.02 which requires that if a document is in a language other than English, a translation must be obtained "so that the record is clear as to the precise facts the examiner is relying upon in support of the rejection." The computer translation relied upon by the Examiner does not make the record clear as to the precise facts the examiner is relying upon in support of the rejection. For this reason it is submitted that the rejection of claim 1 over Sumiya '687 is improper and it is therefore requested that it be withdrawn.

To sustain the present rejection of claim 1 under 35 U.S.C. § 103(a), a prima facie case of obviousness must be established. MPEP § 2142 provides that a prima facie case of obviousness requires three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. In the present case, none of the criteria set forth in MPEP § 2142 have been satisfied with respect to claim 1.

As amended herein, claim 1 is drawn to a concentration method using magnetic particles. The claimed concentration method includes capturing a target substance in a first suspension having a first volume directly or indirectly with magnetic particles, separating the magnetic particles from the first suspension by passing the first suspension through a first liquid passage and exerting a magnetic field from outside the first liquid passage to the inside of the first liquid passage to thereby attract the magnetic particles to an inner wall of the first liquid passage, suspending the magnetic particles in a liquid having a second volume, wherein the second

volume is less than the first volume, by passing the liquid through the first liquid passage without exerting a magnetic field on the first liquid passage, and eluting the target substance from the magnetic particles suspended in the liquid.

Neither Tajima '602 nor Sumiya '687 disclose, suggest or motivate all of the limitations of claim 1. Thus, at least one of the elements of a prima facie case of obviousness against claim 1 cannot be supported by Tajima '602 or Sumiya '687. Thus, neither Tajima '602 nor Sumiya '687 can support a prima facie case of obviousness against claim 1.

In addition, the remaining criteria of a prima facie case of obviousness cannot be satisfied by Tajima '602 or Sumiya '687 with respect to claim 1. In particular, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references to arrive at the claimed subject matter. Further, there could be no reasonable expectation of success that such a modification would achieve the claimed subject matter.

The concentration method of claim 1 includes capturing a target substance in a first suspension directly or indirectly with magnetic particles. The claimed method permits a liquid having a volume that is greater than the maximum volume capable of being sucked into or discharged from a liquid passage upon one of suction or discharge to be continually passed through the liquid passage.

In contrast thereto, Sumiya '687 discloses a method and device in which a capture member is arranged in the liquid path. While Sumiya '687 discloses that the capture member can combine a "special material" in liquid, Sumiya '687 does not disclose or suggest that the device includes magnetic particles to be suspended in a liquid.

Also, while paragraph [0030] of Sumiya '687 discloses "the alternative removal means by the energy added from the outside, such as an ultrasonic wave and an electromagnetic wave, near the member", Sumiya '687 is devoid of any disclosure or suggestion that the removal means functions to separate and re-suspend magnetic particles in a liquid as in the concentration method of claim 1. On the contrary, it is clear that a magnetic force means is not necessary in the method of Sumiya '687 because the capture member is fixed to the liquid path.

Consequently, the concentration method of claim 1 is not disclosed or suggested by Sumiya '687, in that it includes the use of magnetic particles which can be suspended in a liquid

and are not always fixed to the liquid path, and that a magnetic force means is present in order to separate the magnetic particles.

For the foregoing reasons, it is submitted that Sumiya '687 does not disclose or suggest each and every element of independent claim 1. Accordingly, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. § 103(a) over Sumiya '687 be withdrawn.

As noted above, the concentration method of claim 1 includes capturing a target substance in a first suspension having a first volume directly or indirectly with magnetic particles, separating the magnetic particles from the first suspension by passing the first suspension through a first liquid passage and exerting a magnetic field from outside the first liquid passage to the inside of the first liquid passage to thereby attract the magnetic particles to an inner wall of the first liquid passage and suspending the magnetic particles in a liquid having a second volume, wherein the second volume is less than the first volume, by passing the liquid through the first liquid passage without exerting a magnetic field on the first liquid passage, and eluting the target substance from the magnetic particles suspended in the liquid.

In contrast thereto and as admitted in the Office action, Tajima '602 does not disclose or suggest re-suspending the magnetic particles in a second liquid after the magnetic particles have been separated from a first suspension in which the second liquid has a smaller volume than the first suspension. Accordingly, Tajima '602 does not disclose or suggest the concentration method of claim 1.

For the foregoing reasons, it is submitted that Tajima '602 does not disclose or suggest each and every element of claim 1. Accordingly, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. §103(a) over Tajima '602 be withdrawn.



PATENT
Attorney Docket No. 10287.62
Customer No.: 000027683

D. Conclusion

Claims 1-14 are now pending in the present application. In view of the foregoing amendments and remarks, reconsideration and allowance of all pending claims is respectfully requested. The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,

Randall C. Brown
Registration No. 31,213

Dated: 5/16/05
HAYNES AND BOONE, LLP
901 Main Street, Ste. 3100
Dallas, Texas 75202-3789
Telephone: 214-651-5242
Facsimile: 214-200-0802
File: 10287.62

D-1339278.1